



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2014-0577; Directorate Identifier 2013-SW-042-AD]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Helicopters Deutschland GmbH (Previously Eurocopter Deutschland GmbH) (Airbus Helicopters) Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for Airbus Helicopters Model EC135P1, EC135T1, EC135P2, EC135T2, EC135P2+, EC135T2+, and MBB-BK 117 C-2 helicopters. This proposed AD would require inspecting certain washers for movement and making appropriate repairs if the washers move. This proposed AD is prompted by play found between the Smart Electro Mechanical Actuator (SEMA) and the control rod during installation work on a helicopter. The proposed actions are intended to prevent loss of concerned control axis and subsequent loss of control of the helicopter.

**DATES:** We must receive comments on this proposed AD by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the European Aviation Safety Agency (EASA) AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact Airbus Helicopters, Inc., 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Matt Wilbanks, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [matt.wilbanks@faa.gov](mailto:matt.wilbanks@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

EASA, which is the Technical Agent for the Member States of the European Union, issued EASA AD No. 2013-0176, dated August 7, 2013, to correct an unsafe condition for Eurocopter Deutschland GmbH Model EC 135 P1 (CDS), EC 135 P1 (CPDS), EC 135 P2+, EC 135 P2 (CPDS), EC 135 T1 (CDS), EC 135 T1 (CPDS), EC 135 T2+, EC 135 T2 (CPDS), EC 635 P2+, EC 635 T1 (CPDS), EC 635 T2+, and MBB-BK 117 C-2 helicopters. EASA advises that during installation work on a helicopter, it

was discovered that it was not possible to install attachment hardware on a threaded blind borehole between the SEMA and the control rod without play. According to EASA, the loose attachment hardware was caused by an “unfavourable adding of the tolerances” of the individual attachment hardware elements. EASA states that as a result, the screw pushed against the bottom of the threaded blind borehole on the SEMA, and no clamping force could be achieved on the screw head. EASA advises that this condition, if not detected and corrected, could lead to loss of the concerned control axis, possibly resulting in loss of helicopter control. For these reasons, EASA AD No. 2013-0176 requires a one-time inspection of the affected SEMA attachment hardware to detect improper connection and play and, depending on the findings, replacement of the affected hardware.

Since the issuance of EASA AD No. 2013-0176, Eurocopter Deutschland GmbH has changed its name to Airbus Helicopters Deutschland GmbH.

### **FAA’s Determination**

These helicopters have been approved by the aviation authority of Germany and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA, its technical representative, has notified us of the unsafe condition described in its AD. We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition is likely to exist or develop on other products of the same type design.

### **Related Service Information**

Eurocopter reported in Alert Service Bulletins (ASBs) EC135-22A-015, Revision 1, dated January 28, 2013, and MBB BK117 C-2-22A-009, Revision 1, dated August 3,

2009, that it was discovered during the installation work on a helicopter that it was not possible to establish attachment hardware on a threaded blind borehole between the SEMA and the control rod without play. The ASBs state that “unfavourable adding of the tolerances” of the individual attachment hardware elements caused the screw to push against the bottom of the threaded blind borehole on the SEMA, preventing any clamping force on the screw head. The ASBs call for inspecting the SEMA attachment hardware connected to their respective control rods for play and making the proper adjustments to eliminate any play.

### **Proposed AD Requirements**

This proposed AD would require, within 50 hours time-in-service, inspecting whether the washers can be moved in the attachment hardware that connects the SEMA and the control rod of the longitudinal, lateral, and yaw actuators. For Model MBB BK117 C-2 helicopters, this inspection is only for the hardware connecting the Yaw-SEMA and the Yaw-SEMA control rod. If none of the washers can be moved, then no further action is needed. If a washer can be moved, then this proposed AD would require replacing the four screws, installing two additional washers, and torque-tightening the screws to 5-6 Nm.

### **Differences between this Proposed AD and the EASA AD**

The EASA AD applies to Eurocopter Model EC635P2+, EC635T1 and EC635T2+ helicopters. The proposed AD does not apply to these model helicopters because they have no FAA type certificate.

### **Costs of Compliance**

We estimate that this proposed AD would affect 385 helicopters of U.S. Registry and that labor costs average \$85 per work-hour. Based on these estimates, we expect the following costs:

- Inspecting for movement of the washers would require 1.5 work hours for a labor cost of \$128 per helicopter and \$49,280 for the U.S. fleet.
- Replacing the screws and related work would require an additional 0.5 work-hours for a labor cost of \$43. Screws would cost \$4 each while washers would cost \$10 each. We estimate the cost would be \$79 per repair.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that

authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Airbus Helicopters Deutschland GmbH (Previously Eurocopter Deutschland GmbH) (Airbus Helicopters) Helicopters:** Docket No. FAA-2014-0577; Directorate Identifier 2013-SW-042-AD.

#### **(a) Applicability**

This AD applies to Airbus Helicopters Model EC135P1, EC135T1, EC135P2, EC135T2, EC135P2+, EC135T2+, and MBB-BK 117 C-2 helicopters, certificated in any category.

#### **(b) Unsafe Condition**

This AD defines the unsafe condition as loose attachment hardware between the Smart Electro Mechanical Actuator (SEMA) and a control rod. This condition could result in loss of the control axis and subsequent loss of control of the helicopter.

#### **(c) Comments Due Date**

We must receive comments by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register]**.

#### **(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.



**(e) Required Actions**

(1) Within 50 hours time in service (TIS), for Model EC135P1, EC135T1, EC135P2, EC135T2, EC135P2+, and EC135T2+ helicopters, do the following:

(i) Using Figure 1 and Figure 2 of Eurocopter Alert Service Bulletin EC135-22A-015, Revision 1, dated January 28, 2013 (ASB EC135-22A-015) as reference, inspect the attachment hardware between the SEMA and the longitudinal actuator control rod to determine whether any of the washers can be moved.

(A) If no washer can be moved, no further action is needed.

(B) If a washer can be moved, replace the four screws and install two additional washers, part number (P/N) EN2139-05016, to connect the SEMA with the control rod. Torque-tighten each screw to 5-6 Nm.

(ii) Using Figure 1 and Figure 2 of ASB EC135-22A-015 as reference, inspect the attachment hardware between the SEMA and the lateral actuator control rod to determine whether any of the washers can be moved.

(A) If no washer can be moved, no further action is needed.

(B) If a washer can be moved, replace the four screws and install two additional washers, P/N EN2139-05016, to connect the SEMA with the control rod. Torque-tighten each screw to 5-6 Nm.

(iii) Using Figure 1, Figure 3, and Figure 4 of ASB EC135-22A-015 as reference, inspect the attachment hardware between the SEMA and the yaw actuator control rod to determine whether any of the washers can be moved.

(A) If no washer can be moved, no further action is needed.

(B) If a washer can be moved, replace the four screws and install two additional washers, P/N EN2139-05016, to connect the SEMA with the control rod. Torque-tighten each screw to 5-6 Nm.

(2) Within 50 hours TIS, for Model MBB BK117 C-2 helicopters, using Figure 1 of Eurocopter Alert Service Bulletin MBB BK117 C-2-22A-009, Revision 1, dated August 3, 2009, as reference, inspect the attachment hardware between the Yaw-SEMA and the Yaw-SEMA control rod to determine whether any of the washers can be moved.

(i) If no washer can be moved, no further action is needed.

(ii) If a washer can be moved, replace the four screws and install two additional washers, P/N EN2139-05016, to connect the SEMA with the control rod. Torque-tighten each screw to 5-6 Nm and apply polyurethane lacquer onto the attachment hardware.

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Matt Wilbanks, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [matt.wilbanks@faa.gov](mailto:matt.wilbanks@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

The subject of this AD is addressed in the European Aviation Safety Agency (EASA) AD No. 2013-0176, dated August 7, 2013. You may view the EASA AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2014-0577.

**(i) Subject**

Joint Aircraft Service Component (JASC) Code: 2213, Flight Controller.

Issued in Fort Worth, Texas, on August 8, 2014.

**Lance T. Gant,**

*Acting Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.*

**BILLING CODE 4910-13-P**

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